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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR    | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/606,163      | 06/25/2003  | Michael Nicholas Dalton |                     | 3588             |

7590 04/19/2007  
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| EXAMINER |
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CHAO, ELMER M

|          |              |
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| ART UNIT | PAPER NUMBER |
|----------|--------------|

3737

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE  | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS                               | 04/19/2007 | PAPER         |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/606,163

Applicant(s)

DALTON, MICHAEL NICHOLAS

Examiner

Elmer Chao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-52 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/3/2003</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1-10, 12-16, 18-20, 24-30, 32-45, and 47-52** are rejected under 35 U.S.C. 102(b) as being anticipated by Dumoulin et al. (U.S. 5,526,812).

Regarding **Claims 1, 8-10, 12-16, 18-20, 24-30, 32-34, 37-45, and 47-52**, Dumoulin et al. teaches a system and method comprising: providing a partial reflective device having a front surface and a back surface, providing a display member having a display surface configured to display a display image in real time, and orienting said display member with respect to said partial reflective device so that said display image appears superimposed over an object to a viewer (see col. 4, line 49 – col. 5, line 12; col. 6, lines 51-60, refer to the partially silvered mirror reflecting an image from a video monitor; col. 1, lines 35-40); providing a computer (Fig. 1, Item 100) connected to a tracking system having a transmitter and receiver device (Fig. 1, Item 50); tracking the reflective device (col. 3, lines 51-62); wherein said tracking comprises displaying a scanned image that corresponds with a portion of said object (col. 4, lines 41-44; col. 7, lines 4-10); wherein said providing said computer comprises storing multiple scanned images, each of which represents a portion of the object (col. 3, lines 29-36; col. 4, lines 4-12) and displaying said scanned images (col. 4, lines 12-17); changing said

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display image among said multiple images by the viewer triggering said image-changing device (col. 4, lines 37-41, referring to viewing angle and scale; col. 4, lines 59-63; col. 6, lines 28-43; col. 7, lines 4-10); maneuvering at least one of said partial reflective device and said display member to a location aligned with the optical path of the viewer (col. 6, lines 61 – col. 7, line 3) and aligning said display image with said object so that at least a portion of said display image that represents said object appears to be substantially superimposed there over (col. 6, lines 51-60; col. 6, lines 6-13); and wherein said orienting comprises reflecting said display image against said partial reflective device in an optical viewing path of the viewer (col. 6, lines 51-60, if a partially silvered mirror is used then the step of orienting is required to reflect the image from a video monitor).

Regarding **Claims 2-7, and 35**, the display member, partial reflective device, and receiver are all capable of being movable with respect to each other (see col. 6, line 51 – col. 7, line 3; col. 6, lines 6-13) and similarly, they are capable of being fixable in relationship to each other due to the fact that the operator will eventually position and observe the image as the components are fixed in their aligned positions (col. 6, lines 51-60; col. 6, lines 6-13).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. **Claim 17** is rejected under 35 U.S.C. 102(b) as being anticipated by Dumoulin et al. in view of Steckl et al. (U.S. 2002/0195932A1). Dumoulin et al. teaches the limitations as discussed above but fails to explicitly teach the partial reflective device comprising an antireflective film disposed adjacent at least one of said front surface and said back surface thereof. However, in the field of displays, Steckl et al. teaches a display containing an anti-reflective film (Para [0003]). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to dispose anti-reflective film on at least one of said front surface and said back surface in order to improve the display contrast of the image (for motivation see Para [0038], last sentence).

5. **Claims 11, 31, and 46** are rejected under 35 U.S.C. 102(b) as being anticipated by Dumoulin et al. in view of Lai (U.S. 6,256,366 B1) and Pan et al. (U.S. 6,272,200 B1). Dumoulin et al. teaches the limitations as discussed above but fails to explicitly teach the interpolation of images. However, Dumoulin et al. does teach the patient initially being scanned by MRI, CT, PET or a similar imaging device capable of producing 3-D data (col. 3, lines 29-39). In the field of volumetric imaging, interpolation algorithms are often used to reconstruct 3-D images from scan data, as shown by Lai (col. 18, lines 53-62) and Pan (col. 2, lines 7-25). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Dumoulin et al.'s invention to include the step of interpolating multiple images in order to

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reconstruct a 3-D data set (for motivation see Lai (col. 18, lines 53-62) and Pan (col. 2, lines 7-25)).

6. **Claims 21-23** are rejected under 35 U.S.C. 102(b) as being anticipated by Dumoulin et al. in view of Frantz et al. (U.S. 6,288,785 B1). Dumoulin et al. teaches the limitations as discussed above but fails to explicitly teach the tracking system being a magnetic field tracking system. However, Frantz et al. does teach a magnetic field tracking system (Fig. 1). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Dumoulin et al.'s invention to use a magnetic field tracking system in order to generate a coordinate reference frame and determine positional data (for motivation see col. 5, lines 32-65).

### ***Conclusion***


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elmer Chao whose telephone number is (571)272-0674. The examiner can normally be reached on 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on (571)272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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4/9/2007

  
EILEEN MARCUS MORADER  
SPE 3768